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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,490	09/12/2003	Noriko Tomita	OHG 135	6341
23995	7590	04/11/2005	EXAMINER	
RABIN & Berdo, PC 1101 14TH STREET, NW SUITE 500 WASHINGTON, DC 20005			LUU, CHUONG A	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

# Office Action Summary

Application No.

10/660,490

Applicant(s)

TOMITA ET AL.

Examiner

Chuong A. Luu

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/12/12/03/8/4/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

**PRIOR ART REJECTIONS**

**Statutory Basis**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**The Rejections**

Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Garito (U.S. 4,581,315).

Garito discloses photoresistive compositons with

**(1)** washing a semiconductor substrate (2);

depositing a high molecular straight-chain organic compound (1) on the surface of said semiconductor substrate (2) during or after washing of said semiconductor substrate (see column 22, lines 10-23. Figure 2);

**(2)** wherein said high molecular straight-chain organic compound is selected from substances of lower boiling point than 500°C (see column 22, lines 28-47);

**(3)** wherein said high molecular straight-chain organic compound of a single type (see column 22, lines 10-23);

**(6)** wherein, after deposition of said high molecular straight-chain organic compound onto the surface of the semiconductor substrate, said high molecular straight-chain organic compound further eliminated by the heat treatment temperature (see column 22, lines 60-63).

Claims 7, 9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Egami et al. (U.S. 6,716,773 B2).

Egami discloses a process for producing semiconductor substrate with

**(7)** washing a semiconductor substrate;

depositing a high molecular straight-chain organic compound onto the surface of said semiconductor substrate by spin coating which liquid containing the high molecular straight-chain organic compound and pure water discharged from a spray nozzle while rotating the semiconductor substrate during or after washing of the semiconductor substrate (see column 5, lines 58-67 and column 6, lines 1-9);

**(9)** wherein said high molecular compound a compound single type (see column 5, lines 37-40);

**(12)** wherein, after deposition of said high molecular straight-chain organic compound onto the surface of the semiconductor substrate, said high molecular straight-chain organic compound is further eliminated by the heat treatment temperature (see column 10, lines 51-56).

## **PRIOR ART REJECTIONS**

### **Statutory Basis**

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### **The Rejections**

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garito (U.S. 4,581,315).

Garito discloses the claimed invention except for the high molecular straight-chain organic compound is cholesterol ( $C_{27}H_{46}O$ ) and behenic acid ( $C_{21}H_{43}COOH$ ). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the suitable materials to achieve its objective, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egami et al. (U.S. 6,716,773 B2).

Egami discloses the claimed invention except for the high molecular straight-chain organic compound is cholesterol ( $C_{27}H_{46}O$ ) and behenic acid ( $C_{21}H_{43}COOH$ ). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the suitable materials to achieve its objective, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Egami et al. (U.S. 6,716,773 B2) in view of Sato et al. (U.S. 5,605,867).

Egami teaches the above outlined features except for disclosing the high molecular straight-chain organic compound is selected from substances of lower boiling point than  $500^{\circ}C$ . However, Sato discloses a semiconductor device with (2) wherein said high molecular straight-chain organic compound is selected from substances of lower boiling point than  $500^{\circ}C$  (see column 6, lines 61-67 and column 7, lines 1-2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the semiconductor of Egami (accordance with the teaching of Sato). Doing so would facilitate the manufacture of the semiconductor structure and increase the speed of the semiconductor device.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong A. Luu whose telephone number is (571) 272-1902. The examiner can normally be reached on M-F (6:15-2:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chuong Anh Luu  
Patent Examiner  
April 05, 2005